Abstract of the Disclosure

An X-ray diagnostic system is provided, which uses X-rays to image the lower limb of an object under conditions suitable for a flow of an X-ray contrast agent injected into the object. In the system, a C-shaped arm supports both an X-ray tube and an X-ray detector so that an object-laid tabletop is located between both the tube and the detector. For instance, one of the tabletop and the C-shaped arm is relatively moved to the other so that the object is imaged along a body-axis direction thereof. The apparatus is able to perform a fluoroscopic scan to obtain a body-axis directional fluoroscopic image of the agent-injected object and to set imaging parameters, region by region in the body-axis direction, necessary for an imaging scan using the fluoroscopic image. The imaging parameters are used for the imaging scan of the agent-injected object.